

REMARKS/ARGUMENTS

Claims 15, 17, 19, 20, 22-25, 27, and 29-33 have been re-submitted. Claims 15, 17, 19, 20, 24, 25, 27, 29, 30, and 33 have been amended. Claims 1-14, 16, 18, 21, 26, 28, and 34-42 have been canceled.

The Examiner objected to the drawings under 37 CFR 1.83(a), as not showing every feature of the invention specified in the claims. The Examiner rejected Claims 21, 25-33, and 39 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Additionally, the Examiner rejected Claims 15-42 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner rejected Claims 15-21, 23, 24, 34-39, 41, and 42 under 35 U.S.C. § 102(e) as being anticipated by Pritchard et al. (U.S. Patent Number 6,381,964). The Examiner rejected Claims 22 and 40, as understood, under 35 U.S.C. § 103(a) as being unpatentable over Pritchard et al. in view of Sjunnesson et al. (U.S. Patent Number 5,816,050).

The Examiner requires the submission of a new oath or declaration under 37 CFR 1.67 because the application presents a claim for subject matter not originally claimed or embraced in the invention (dome cooling nozzles).

Telephonic Interview

Applicant wishes to thank Examiner Koczo for the courtesies extended during the telephonic interview of March 30, 2004. During the interview, the

amendments set forth above to Claims 15, 17, 19, 20, 24, 25, 27, 29, 30, and 33 were discussed. In addition, Applicant's representative pointed out that the cited references fail to teach or suggest a gas turbine engine fuel injection and combustor system including the combination of features set forth in each of currently amended independent Claims 15 and 25, including a fuel injector body incorporating both pilot circuit and main circuit fuel nozzles. Support for the amendments to the independent and dependent claims can be found, for example, in originally filed Claim 2, page 7, lines 23-24 of the originally filed specification, and in the originally filed figures. No new matter has been added.

Applicant appreciates the Examiner's indication that the foregoing claim amendments and claim cancellations appear to overcome the objection to the drawings and the rejections to the claims under 35 U.S.C. § 112, first and second paragraphs.

Drawings

With respect to the features recited in Claims 22, 23, 31, 32, 40, and 41, Applicant appreciates the Examiner's indication that it appears that the objection to the drawings would be withdrawn in view of the remarks presented during the interview and the cancellation of Claims 40 and 41.

With respect to the features recited in remaining Claims 16, 18, 26, 28, 34, and 35, Applicant submits that the amendments and cancellations of these claims to 1.) substitute the use of the terms pilot circuit and main circuit 'nozzles' for pilot circuit and main circuit 'systems', and 2.) delete the subject matter reciting 'wherein pilot circuit fuel and main circuit fuel injectors are located in the combustion chamber at essentially the same axial and radial locations', overcomes the objection to the drawings. Applicant appreciates the Examiner's indication that these claim amendments and claim cancellations appear to

overcome the objections to the drawings. Withdrawal of the objection to the drawings under 37 CFR 1.83(a) is respectfully requested.

The Examiner rejected Claims 15-42 under statutory requirements and Applicant has canceled Claims 16, 18, 21, 26, 28, and 34-42. The cancellation of Claims 16, 18, 21, 26, 28, and 34-42 has not been made to avoid statutory requirements. Instead, claim amendments have been incorporated to more clearly describe the invention, to particularly point out and distinctly claim the subject matter of the Applicant's invention, to further structurally limit any preceding claims, and to indicate novelty and unobviousness.

35 USC § 112, First Paragraph

Claims 21 and 39 have been cancelled, and Claim 25 has been amended to overcome the rejection under 35 USC § 112, first paragraph. In particular, the recitation of "the combined geometry of the pilot circuit and main circuit...is less than the volume of the combustion chamber" has been deleted from remaining independent claim 25. Applicant appreciates the Examiner's indication during the telephonic interview that deleting such claim language appears to overcome the rejection under 35 USC § 112, first paragraph.

Accordingly, the rejection of Claims 21 and 39 is now moot, and the withdrawal of the rejection of Claims 25-33 under 35 USC § 112, first paragraph, is respectfully requested.

35 USC § 112, Second Paragraph

Claims 16, 18, 21, 26, 28, have been cancelled, and Claims 15, 17, 19, 20, 25, 27, 29 and 30 have been amended to overcome the rejection under 35 USC § 112, second paragraph. Claims 34-42 have been cancelled, and

therefore, the rejection of these claims under 35 USC § 112, second paragraph, is now moot.

With regard to the rejection of Claims 24 and 33, Applicant appreciates the Examiner's indication during the telephonic interview that after further consideration this rejection would be withdrawn. Applicant also appreciates the Examiner's indication during the telephonic interview that the amendments to Claims 15, 17, 19, 20, 25, 27, 29 and 30 appear to overcome the rejection under 35 USC § 112, second paragraph.

Accordingly, the withdrawal of the rejection of Claims 15-42 under 35 USC § 112, second paragraph, is respectfully requested.

35 U.S.C. § 102(e)

Pritchard et al. (U.S. Patent Number 6,381,964)

Pritchard discloses a multiple annular combustion chamber swirler including a pilot mixer 52 including a pilot fuel nozzle 64 mounted in a pilot housing 60 (column 2, lines 53-64), and a main mixer 54 including fuel injection ports 98 formed in a fuel manifold 94 (column 3, lines 33-56). During starting and low power conditions, only the pilot mixer 52 is fueled, and the main mixer 54 is fueled under high power conditions (column 4, lines 54-58).

Pritchard does not disclose the subject matter of each independent Claim 15 and 25, as amended, as being *inter alia*, comprised of a fuel injector body that incorporates both a pilot circuit and main circuit fuel nozzle (amended Claim 15, at lines 16 and 17, and amended Claim 25, at lines 14 and 15). Significantly, Pritchard does not disclose a single fuel injector body as in the present invention, and instead teaches the use of separate housing structures

60 and 94 for the pilot fuel nozzle 64 and the main fuel nozzles 98, respectively. FIG. 1 of the present invention demonstrates these features clearly with pilot circuit fuel nozzle 21 and main circuit fuel nozzle 32 shown arranged in fuel injector body 15.

Thus, Pritchard et al. does not anticipate or render obvious the subject matter of each of independent Claims 15 or 25, and corresponding dependent Claims 17, 19, 20, 22-24, 27, and 29-33. Accordingly, the withdrawal of the rejection of Claims 15-21, 23, 24, 34-39, 41, and 42, under 35 USC § 102(e) is respectfully requested.

35 U.S.C. § 103(a)

Sjunnesson et al. (U.S. Patent Number 5,816,050)

With respect to the prior art rejection of Claim 40, this rejection is now moot in view of the cancellation of Claim 40.

With respect to the rejection of Claim 22, as indicated in the Office Action, Sjunnesson et al. has been relied upon to disclose that a gas combustor can be either of the “can” type or the “annular” type. Moreover, Sjunnesson et al. does not disclose or suggest a fuel injector body that can incorporate both a pilot circuit and main circuit fuel nozzle. Thus, Sjunnesson et al. does not otherwise overcome the deficiencies of Pritchard et al. as applied against independent Claim 15.

Since Claim 22 depends from independent 15, Claim 22 is also patentably distinguishable over the cited prior art. Accordingly, the withdrawal of the rejection of Claims 22 and 40 under 35 USC § 103(a) is respectfully requested.

Oath/Declaration

The Office Action indicates that the claimed feature of "dome cooling nozzles" is not originally claimed or embraced in the statement of the invention.

It is respectfully submitted that page 7, line 12, of the originally filed specification and Fig. 1 of the originally filed drawings disclose the use of domes cooling nozzles 19. Accordingly, the withdrawal of the requirement of a supplemental oath or declaration under 37 CFR 1.67 is respectfully requested.

CONCLUSION

Reconsideration and withdrawal of the Office Action with respect to Claims 15, 17, 19, 20, 22-25, 27, and 29-33 is requested.

In the event the examiner wishes to discuss any aspect of this response, please contact the attorney at the telephone number identified below.

Respectfully submitted,

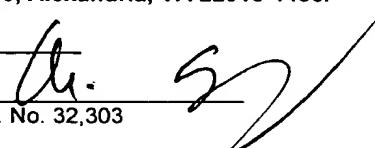
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on 4/19/04


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